

**Science**  
**Technology**  
**Engineering**  
**Mathematics**

**Creating  
New Ways  
To Feed  
The World**



**2018**  
**SAN JOAQUIN COUNTY**  
**CROP REPORT**



## Table of Contents

1. Agricultural Commissioner's Staff & Board of Supervisors
2. Creating New Ways to Feed the World
3. STEM Technology
4. Fruit & Nut Crops
5. Fruit & Nut Crops (Cont.)
6. Vegetable Crops
7. Vegetable Crops (Cont.)
8. Field Crops
9. Apiary Products
10. Seed Crops & Nursery Products
11. Livestock & Poultry Products
12. Top 10 Commodities & State Ranking Commodities
13. Trading Partners
14. Careers in Agriculture
15. Old to New Technology
16. Direct Marketing
17. Organic Production
18. Pest Exclusion
19. Pest Detection
20. Weights & Measures
21. General Information & Our Partners

**SAN JOAQUIN**  
—COUNTY—

Greatness grows here.



**SAN JOAQUIN**  
COUNTY  
Greatness grows here.

OFFICE OF THE  
**AGRICULTURAL**  
**COMMISSIONER/SEALER**

**TIM PELICAN**  
Agricultural Commissioner  
Sealer of Weights & Measures  
**KAMAL BAGRI**  
Asst. Agricultural Commissioner &  
Asst. Sealer of Weights & Measures

**Karen Ross, Secretary**  
**California Department of Food and Agriculture, and**  
**The Honorable Board of Supervisors, San Joaquin County**

Dear Secretary and Board Members:

In accordance with Section 2272 and Section 2279 of the California Food and Agricultural Code, I am pleased to present the eighty-fifth Annual Report of Agricultural Production in San Joaquin County.

The gross value of agricultural production for 2018 was \$2,594,246,000. This represents a 2.62% increase over the 2017 value of \$2,527,989,000.

Overall, agricultural commodity values showed a modest increase in 2018. Fruit and Nut Crops saw a gain of \$41,237,000 in value, which was an increase of 3.03% from 2017. This gain is due to a large increase in bearing acreages and a rise in price of almonds and blueberries. Fruit and Nut Crops continued to have the highest total value at \$1,403,768,000. Livestock and Poultry Products increased by 8.69% valuing \$467,289,000 due to a large increase in egg production and price per dozen. Nursery Products increased by 2.31% totaling to \$120,004,000. Apiary had the largest increase at 23.97% with a total value of \$32,910,000.

Some commodities showed a decrease in value: Vegetable Crops decreased 3.92% in value due to an overall decrease in bearing acres. Livestock and Poultry decreased by 1.77% because of a decrease in overall prices. Field Crops saw a decrease of 4.06% due to an acreage shift to permanent crops. Seed Crops decreased by 16.42% due to a significant loss of planted acreage and a drop in overall price.

The values shown are estimates based on the most common method of sale for the individual commodity, except for fresh fruits and vegetables where the value is based on the F.O.B. packed price at the shipping point. The figures contained in this report are gross values rather than net returns to the grower.

I wish to express my appreciation to all who cooperated in providing data for this report, including our agricultural producers, industry representatives and other public agencies. A special Thank You to San Joaquin Delta College who has partnered with the Agricultural Commissioner's office and has helped to create this year's layout. I would also like to express my sincere thanks to the Agricultural Commissioner staff, especially Agricultural Biologists/ Standards Inspectors Jatinder Gill, Casey Wright, Angelica Goehring and Jana Sampson for compiling the necessary information that made this report possible.

Respectfully submitted,

Tim Pelican

**Agricultural Commissioner/Sealer**

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# Board of Supervisors

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Chairman of the Board

District 2



Katherine Miller

District 3



Tom Patti  
Vice Chairman

District 4



Chuck Winn

District 5



Bob Elliott

Monica Nino  
County Administrator

## AGRICULTURAL COMMISSIONER'S OFFICE STAFF

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### Assistant Agricultural Commissioner/Sealer

Kamal Bagri

### Deputy Agricultural Commissioners

Martin Brockman Jessica Fowler Donald McCoon Jr. Robert Pelletier

### Deputy Sealer of Weights and Measures

Dave Singh

### Senior Agricultural Biologists

Colleen Bednarek Humberto Castro Raung Long Kim Martin Rand Medina

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I

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Jonathan Brower  
Jana Centoni-Sampson  
Barry Dagenbach  
Danalynn Galvin

II

Joseph Galdes  
Angelica Goehring  
Wesley Van Blair  
Casey Wright

III

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Jatinder Gill  
Matt Hoekman  
Harrison McDowall

Ben Delph  
Josh Hanson  
Maria Jochimsen  
Arif Kever  
Rod Saiki

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Jamie Clyburn  
Monica Hernandez  
Laura Rocha

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Ferdinand Pura

### Agricultural Technician

Brendt Boyer

### Office Assistants

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Laurin Ortega

### Account Technician II

Share Hawkins

### Administrative Secretary

Annette Lovato

### Office Technician Coordinator

Hiromi Hernandez

### Account Technician I

Amandeep Kalkat

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Julio Abugarade Robert Bradley Zachary Chatas Darla Durbin Tracy Eaton Rose Engstrom Amy Freeman Robert Guzzi  
Kenlee Hiatt Elizabeth Hinojosa Lectica Hinojosa Julia Knaggs Brett Koth Miles Lugo Socorro Medina  
Pauline Montemayor Judy Nepote Maria Oropeza Elena Perez-Racon Joe Pimentel Tanya Ray Elvira Rios-Prock  
Luis Salcedo Stephanie Sanabia Tammy Schaeffe Ashley Thierry Kimberly Valdez Paula Woodward Larry Wright Jose Zacarias

### Recently Retired

Tom Dawson Ted Viss



# Creating New Ways To Feed the World

The global population is currently increasing by 1.07% annually, or 82 million people per year. By the year 2050, the world population is expected to reach 9.2 billion people. With this constant rise in population, agriculture needs to increase proficiency while it strives to continue feeding this global population. With more land being devoted to urban needs and increased restrictions on the use of air, water and pest mitigation tools, farmers are facing increasing challenges keeping up with global demand. Increasing the overall production efficiency of agriculture will provide more food security for each country. With an increase of technology usage and research, agriculture has started to utilize STEM (Science, Technology, Engineering, and Mathematics). STEM is an educational pathway that implements new technologies that allow for faster and more efficient production of food products to match the increase in population. The use of these technologies is helping San Joaquin County growers to meet the global demands while shipping our products worldwide. From the utilization of drones and crop sensors in precision agriculture to the usage of technological dairy collars and disease traceability in the livestock industry, STEM is the future of agriculture in our county and this nation. Technology in agriculture production allows agriculturists to invent more efficient ways to produce commodities and use more sustainable practices to protect our finite resources.



## Optical Sorting

Optical Sorting is an automated sorting system that uses cameras and lasers to identify the size, shape, and color of a fruit or nut. If the fruit does not meet consumer's standards, then it most likely will not make it past inspection. It will then be utilized for juice or canned products. Once the automated inspection has finished, the product is overseen by a line of workers who also manage the machine itself to ensure it is picking quality produce.

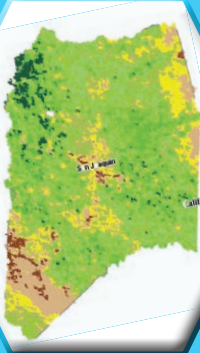
## Drones

Drones can be described as agriculture's 'Little Tractors in the Sky'. They can be used to carry cameras, crop sensing technology, and monitor overall health of the crop. The use of drones can lead to less chemical use, conserve resources and adds to a cleaner, safer work environment for all. Drones help growers acquire data, conserve and eliminate waste of resources, and optimize land utilization. This can lead to increased yields with minimal impact to the environment, helping growers to more efficiently feed a growing world.



Photo provided by Lodi Winegrape Commission





### Normalized Difference Vegetation Index

Farmers can monitor a crop's vegetative health conditions by utilizing the Normalized Difference Vegetation Index (NDVI). NDVI produces an image of a plot's vegetation, which allows for additional monitoring of crops for harmful conditions such as diseases, pests, fungi, or drought. Growers and agronomists utilizing the NDVI can identify, track and respond to problematic crop symptoms before they become visible.

### Cow Collars

Dairymen have been utilizing STEM technological advancements to better manage their herds for decades. Radio tracking collars is one example. These collars can monitor each dairy cow's movements, helping track heat cycles and monitor optimal nutritional needs for each individual. This helps dairymen ensure the health status and efficiency of each cow. Farmers can download an app to their smart device that syncs with these collars and allows them to have all this information at their fingertips.



### Variable Rate Irrigation

Variable Rate Irrigation (VRI) technology can optimize a grower's water use more effectively. Collectively, VRI technology works with in-field sensors, Global Positioning System (GPS), and a Geographic Information System to address specific areas and rates within a field, which may have different site conditions and water requirements. VRI can be managed remotely, saving time, but most importantly reduces surface water use, conserving water resources.

### Precision Agriculture

Precision Agriculture utilizes satellites and site specific technologies to observe, manage, and measure crops. This allows for growers to rely upon technology to enable them to produce a higher yielding crop. Taking advantage of these technological advancements in production ensures more profitability. Precision Agriculture technology includes NDVI, drones, GPS, and advanced irrigation systems.





## Fruit & Nut Crops

CROP	YEAR	BEARING ACREAGE	YEILD PER ACRE	TOTAL	UNIT	VALUE PER UNIT	SUBTOTAL	TOTAL
ALMOND, MEATS	2018	87,300	1.25	109,500	TON	\$4,900.00		\$536,396,000
	2017	74,200	1.02	75,400	TON	\$4,810.00		\$362,721,000
ALMOND, HULLS	2018			219,000	TON	\$90.00		\$19,704,000
	2017			151,000	TON	\$70.00		\$10,553,000
ALMOND SHELLS	2018			109,500	TON	\$3.00		\$328,000
	2017			75,400	TON	\$4.70		\$352,000
APPLES, ALL	2018	2,000	16.58	33,200	TON	\$505.00		\$16,758,000
	2017	2,320	15.40	35,700	TON	\$646.00		\$23,078,000
FRESH	2018			21,600	TON	\$645.00	\$13,926,000	
	2017			23,200	TON	\$862.00	\$20,014,000	
PROCESSING	2018			11,600	TON	\$244.00	\$2,832,000	
	2017			12,500	TON	\$245.00	\$3,065,000	
APRICOTS	2018	618	6.04	3,730	TON	\$797.00		\$2,976,000
	2017	620	8.99	5,580	TON	\$672.00		\$3,749,000
BLUEBERRIES	2018	2,150	5.11	10,990	TON	\$5,560.00		\$61,096,000
	2017	1,590	4.39	6,990	TON	\$3,130.00		\$21,852,000
CHERRIES, ALL	2018	19,900	1.10	21,900	TON	\$4,100.00		\$89,693,000
	2017	19,900	3.10	61,800	TON	\$2,990.00		\$184,572,000
FRESH	2018			16,400	TON	\$5,370.00	\$88,169,000	
	2017			49,800	TON	\$3,600.00	\$179,144,000	
PROCESSING	2018			5,470	TON	\$279.00	\$1,523,000	
	2017			11,930	TON	\$455.00	\$5,428,000	
NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING								



Did you know growers in San Joaquin County utilize drone technology to implement Integrated Pest Management methods?

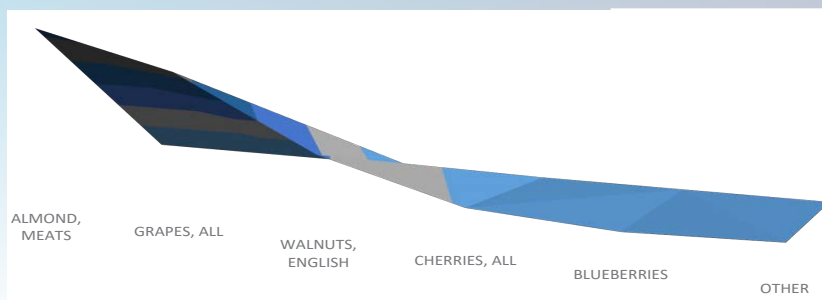
Photo provided by Lodi Winegrape Commission



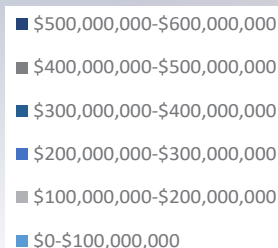
## Fruit & Nut Crops Continued

CROP	YEAR	BEARING ACREAGE	YEILD PER ACRE	TOTAL	UNIT	VALUE PER UNIT	SUBTOTAL	TOTAL
GRAPES, ALL	2018	97,200	7.73	751,000	TON	\$573.00		\$430,492,000
	2017	98,100	6.78	666,000	TON	\$594.00		\$395,541,000
OLIVES, PROCESSING	2018	4,890	2.19	10,700	TON	\$880.00		\$9,395,000
	2017	3,500	5.36	18,700	TON	\$730.00		\$13,685,000
PEACHES, ALL	2018	1,960	17.31	33,900	TON	\$422.00		\$14,290,000
	2017	1,890	23.74	44,800	TON	\$441.00		\$19,784,000
CLINGSTONE	2018	1,270	14.78	18,800	TON	\$463.00	\$8,714,000	
	2017	1,230	20.99	25,800	TON	\$459.00	\$11,814,000	
FREESTONE	2018	685	22.00	15,070	TON	\$370.00	\$5,576,000	
	2017	661	28.85	19,060	TON	\$418.00	\$7,970,000	
PEARS	2018	142	8.00	1,130	TON	\$330.00		\$374,000
	2017	148	9.72	1,440	TON	\$473.00		\$678,000
WALNUTS, ENGLISH	2018	73,600	2.10	155,000	TON	\$1,360.00		\$211,296,000
	2017	67,500	1.86	125,000	TON	\$2,530.00		\$317,372,000
MISCELLANEOUS	2018	1,020						\$10,970,000
	2017	980						\$8,594,000
TOTAL	2018	291,000						\$1,403,768,000
	2017	271,000						\$1,362,531,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING



Top Five Fruit & Nut Crops By Value



Optical Sorting machines can take up to 32 photos of a single cherry. The number of pixels in each photo determines what size and color category each cherry gets sorted into.







## Vegetable Crops

COMMODITY	YEAR	HARVESTED ACREAGE	YIELD PER ACRE	TOTAL	UNIT	VALUE PER UNIT	SUBTOTAL	TOTAL VALUE
ASPARAGUS	2018	1,030	3.01	3,090	TON	\$3,570.00		\$11,041,000
	2017	1,310	2.01	2,630	TON	\$3,750.00		\$9,849,000
CORN, SWEET	2018	2,660	4.36	11,600	TON	\$172.00		\$1,997,000
	2017	3,290	5.94	19,600	TON	\$270.00		\$5,270,000
CUCUMBERS	2018	2,700	9.60	25,900	TON	\$191.00		\$4,948,000
	2017	2,860	8.51	24,300	TON	\$180.00		\$4,387,000
MELONS, ALL	2018	2,620	44.94	117,600	TON	\$309.00		\$36,038,000
	2017	2,960	42.30	125,300	TON	\$305.00		\$36,624,000
WATERMELON	2018	1,950	54.05	105,500	TON	\$308.00	\$32,491,000	
	2017	2,150	49.28	106,000	TON	\$315.00	\$33,410,000	
OTHER	2018	666	18.24	12,150	TON	\$315.00	\$3,547,000	
	2017	812	23.83	19,350	TON	\$250.00	\$3,214,000	
ONIONS	2018	1,385	44.66	61,900	TON	\$227.00		\$14,025,000
	2017	1,409	28.36	40,000	TON	\$161.00		\$6,427,000
PEPPERS	2018	1,250	14.31	17,890	TON	\$740.00		\$13,237,000
	2017	1,380	12.70	17,540	TON	\$411.00		\$7,203,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING



Although pumpkins are not included in San Joaquin County's top ten crops, the county has been number one in pumpkin production in California for the last fifteen years.

There are three annual AgVenture events held in San Joaquin County, which focus on educating over 12,000 third graders about agriculture.







## Vegetable Crops Continued

COMMODITY	YEAR	HARVESTED ACREAGE	YIELD PER ACRE	TOTAL	UNIT	VALUE PER UNIT	SUBTOTAL	TOTAL VALUE
POTATOES	2018	5,950	18.35	109,300	TON	\$337.00		\$36,804,000
	2017	5,170	17.85	92,300	TON	\$683.00		\$63,089,000
PUMPKINS	2018	2,180	26.54	57,800	TON	\$367.00		\$21,196,000
	2017	2,790	17.00	47,400	TON	\$358.00		\$16,961,000
SQUASH	2018	1,270	7.33	9,300	TON	\$574.00		\$5,338,000
	2017	1,490	11	16,300	TON	\$679.00		\$11,079,000
TOMATOES, ALL	2018	20,800	48.02	999,000	TON	\$93.50		\$93,482,000
	2017	23,200	38.99	903,000	TON	\$87.30		\$78,812,000
SHIPPING	2018	1,600	23.89	38,300	TON	\$551.00	\$21,101,000	
	2017	1,870	14.77	27,600	TON	\$560.00	\$15,464,000	
PROCESSING	2018	19,200	50.04	961,000	TON	\$75.30	\$72,382,000	
	2017	21,300	41.12	875,000	TON	\$72.40	\$63,347,000	
MISCELLANEOUS	2018	2,680						\$7,796,000
	2017	3,030						\$16,227,000
TOTAL	2018	43,300						\$245,902,000
	2017	47,400						\$255,928,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING



The barcode on produce stickers allows for you to traceback to the day it was harvested, to the farmer who grew it, and what field it was grown in.

San Joaquin County is where Holt created their first tractor named the Caterpillar. Since the creation of the Caterpillar in 1904, Holt has continued to advance tractors with new technology in agriculture.



# Field Crops

COMMODITY	YEAR	HARVESTED		YIELD PER		VALUE		
		ACREAGE	ACRE	TOTAL	UNIT	PER UNIT	SUBTOTAL	TOTAL VALUE
BEANS, DRY, ALL	2018	5,400	1.43	7,700	TON	\$910.00		\$7,048,000
	2017	7,400	1.07	8,000	TON	\$960.00		\$7,611,000
LIMA	2018	1,950	1.42	2,760	TON	\$1,070.00	\$2,949,000	
	2017	2,500	1.15	2,870	TON	\$1,040.00	\$2,969,000	
BEANS, OTHER	2018	3,450	1.44	5,000	TON	\$840.00	\$4,099,000	
	2017	4,930	1.03	5,100	TON	\$910.00	\$4,642,000	
CORN, GRAIN	2018	27,400	4.64	127,000	TON	\$166.00		\$21,047,000
	2017	45,000	5.23	235,000	TON	\$159.00		\$37,268,000
HAY, ALL	2018	47,400	5.83	276,000	TON	\$206.00		\$57,013,000
	2017	52,700	6.20	327,000	TON	\$182.00		\$59,304,000
ALFALFA	2018	40,700	6.33	257,000	TON	\$211.00	\$54,182,000	
	2017	45,500	6.85	312,000	TON	\$184.00	\$57,459,000	
OTHER	2018	6,740	2.82	19,000	TON	\$149.00	\$2,830,000	
	2017	7,260	2.08	15,100	TON	\$122.00	\$1,846,000	
PASTURE & RANGE	2018	135,000			ACRE	\$50.40		\$6,804,000
	2017	135,000			ACRE	\$47.00		\$6,342,000
IRRIGATED	2018	14,500			ACRE	\$219.00	\$3,180,000	
	2017	14,500			ACRE	\$262.00	\$3,799,000	
OTHER	2018	120,000			ACRE	\$30.00	\$3,599,000	
	2017	120,000			ACRE	\$21.00	\$2,520,000	
RICE	2018	3,620	4.81	17,400	TON	\$365.00		\$6,351,000
	2017	3,060	4.60	14,100	TON	\$350.00		\$4,926,000
SAFFLOWER	2018	2,310	1.55	3,570	TON	\$422.00		\$1,506,000
	2017	6,000	1.26	7,580	TON	\$368.00		\$2,791,000
SILAGE, CORN	2018	45,000	27.20	1,224,000	TON	\$35.50		\$43,418,000
	2017	35,300	27.76	981,000	TON	\$31.10		\$30,546,000
SILAGE, OTHER INCLUDES GREEN CHOP	2018	84,000	12.67	1,060,000	TON	\$41.80		\$44,251,000
	2017	88,000	17.42	1,534,000	TON	\$33.50		\$51,406,000
SORGHUM MILO*	2018	1,500	3.79	5,500	TON	\$245.00		\$1,356,000
	2017						2017 Included in Miscellaneous	
WHEAT	2018	22,800	2.56	58,300	TON	\$194.00		\$11,317,000
	2017	17,000	3.20	54,500	TON	\$146.00		\$7,936,000
MISCELLANEOUS	2018	127						\$258,000
	2017	2,080						\$709,000
TOTAL	2018	373,000						\$200,369,000
	2017	392,000						\$208,839,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING

BEANS, OTHER INCLUDES BLACK EYE, KIDNEY, GARBANZO AND ALL OTHER BEANS NOT LISTED

\* SORGHUM MILO ADDED AS NEW CATEGORY



# Apiary Products

Honey bees are responsible for one of every three bites of food. On average they are accountable for pollinating 80% of all fruit, vegetable, and seed crops. San Joaquin County honey bees play a vital role in the production of crops such as almonds, cherries, pumpkins, blueberries, melons, and apples.

COMMODITY	YEAR	PRODUCTION	UNIT	VALUE PER UNIT	TOTAL VALUE
HONEY	2018	309,000	LBS	\$5.00	\$1,547,000
	2017	279,000	LBS	\$2.05	\$572,000
POLLINATION	2018	182,000	HIVE	\$169.00	\$30,831,000
	2017	164,000	HIVE	\$156.00	\$25,562,000
MISCELLANEOUS	2018				\$532,000
	2017				\$412,000
TOTAL	2018				\$32,910,000
	2017				\$26,546,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING  
MISCELLANEOUS INCLUDES POLLEN, BEES, QUEENS, NUCLEUS, COLONIES AND BEESWAX

BeeWhere is a web based application that uses GIS mapping to track and safeguard hive locations. Pest Control Advisors and Growers can utilize the website to check if bees are present within a mile of an application site when using products toxic to bees.

Visit [beewhere.calagpermits.org](http://beewhere.calagpermits.org) for more information.



## Nursery Products

COMMODITY	YEAR	QUANTITY SOLD	UNIT	TOTAL VALUE
GRAPEVINES, STRAWBERRY PLANTS, FRUIT & NUT TREES	2018	71,537,000	PLANT	\$11,007,000
	2017	75,528,000	PLANT	\$10,758,000
VEGETABLE PLANTS	2018	226,427,000	PLANT	\$13,319,000
	2017	225,392,000	PLANT	\$11,002,000
FLOWERING POTTED PLANTS	2018	1,936,000	EACH	\$5,937,000
	2017	2,166,000	EACH	\$6,424,000
FOLIAGE PLANTS	2018	613,000	EACH	\$4,508,000
	2017	1,225,000	EACH	\$5,235,000
BEDDING PLANTS	2018	495,000	PLANT	\$5,230,000
	2017	589,000	PLANT	\$5,427,000
WOODY ORNAMENTALS	2018	7,632,000	EACH	\$40,962,000
	2017	6,988,000	EACH	\$42,356,000
BULBS, RHIZOMES, TURF, CACTUS, ETC.	2018			\$39,041,000
	2017			\$36,092,000
TOTAL	2018			\$120,004,000
	2017			\$117,294,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING

## Seed Crops

COMMODITY	YEAR	ACREAGE	PER ACRE	TOTAL	UNIT	UNIT	VALUE
BEANS, OTHER	2018	205	24.05	4,930	CWT	\$52.70	\$260,000
	2017	540	21.94	11,840	CWT	\$54.60	\$646,000
MISCELLANEOUS	2018	1,545					\$3,644,000
	2017	1,945					\$4,025,000
TOTAL	2018	1,750					\$3,904,000
	2017	2,490					\$4,671,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING





## Livestock & Poultry

COMMODITY	YEAR	# OF HEAD	LIVE WEIGHT	UNIT	VALUE PER UNIT	TOTAL VALUE
CATTLE & CALVES	2018	128,000	1,023,000	CWT	\$100.00	\$102,300,000
	2017	126,000	1,002,000	CWT	\$104.00	\$104,208,000
SHEEP & LAMBS	2018	16,000	20,800	HD	\$110.00	\$2,288,000
	2017	16,600	21,600	HD	\$138.00	\$2,981,000
BROILERS	2018	938,000	4,770,000	LBS	\$0.51	\$2,423,000
	2017	794,000	4,037,000	LBS	\$0.51	\$2,051,000
TURKEYS	2018	162,000	3,658,000	LBS	\$0.91	\$3,332,000
	2017	220,000	4,176,000	LBS	\$0.97	\$4,064,000
MISCELLANEOUS	2018					\$9,757,000
	2017					\$8,966,000
TOTAL	2018					\$120,100,000
	2017					\$122,270,000

MISCELLANEOUS INCLUDES HOGS, GOATS, SQUAB, DUCKS AND OTHER FOWL

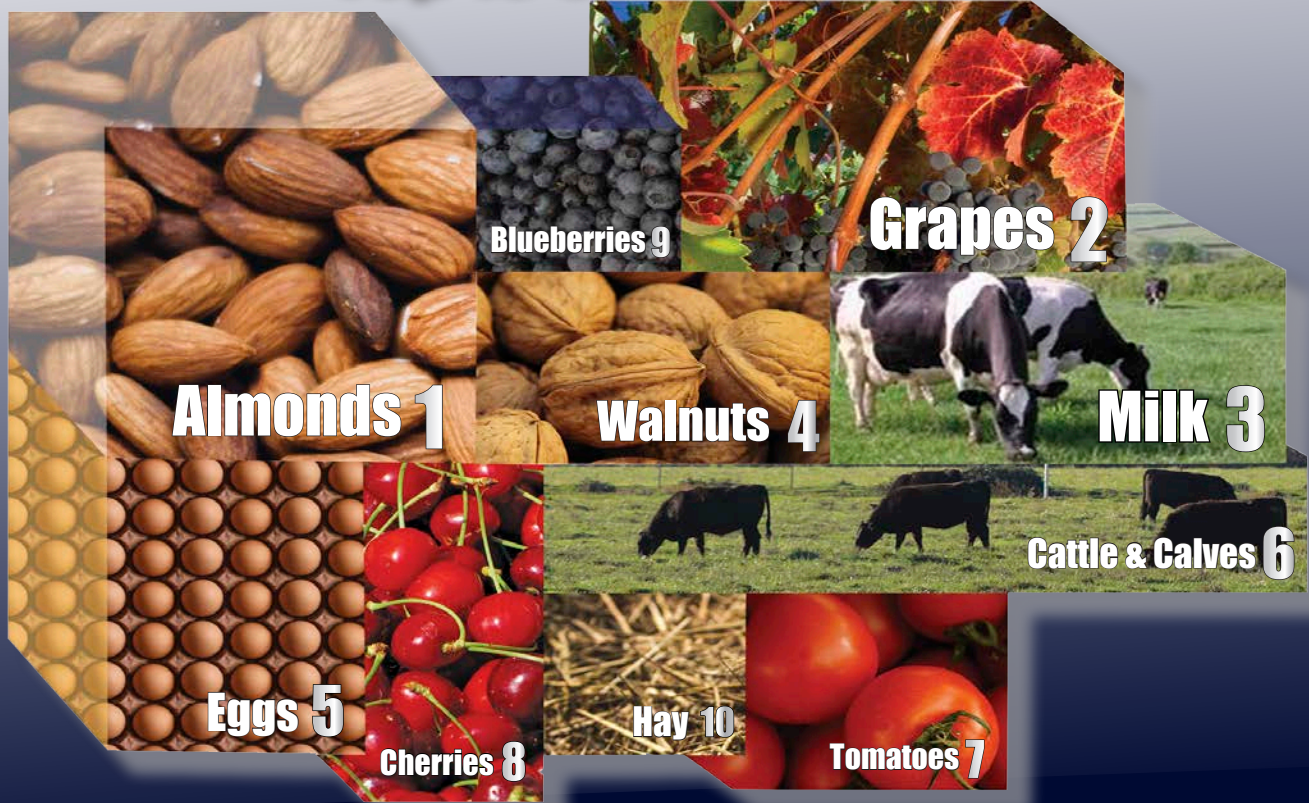
## Livestock & Poultry Products

ITEM	YEAR	PRODUCTION	UNIT	VALUE PER UNIT	TOTAL VALUE
MILK, ALL	2018	23,369,000	CWT	\$15.40	\$360,346,000
	2017	23,322,000	CWT	\$16.60	\$387,386,000
WOOL	2018	109,000	LBS	\$2.20	\$239,000
	2017	113,000	LBS	\$1.12	\$126,000
EGGS, CHICKEN, ALL	2018	73,483,000	DOZ	\$1.44	\$105,816,000
	2017	42,368,000	DOZ	\$0.98	\$41,551,000
MANURE	2018	220,000	TON	\$4.04	\$888,000
	2017	210,000	TON	\$4.04	\$847,000
TOTAL	2018				\$467,289,000
	2017				\$429,910,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING



# Top 10 Commodities



**IN 2017, SAN JOAQUIN COUNTY RANKED IN AT #1 FOR GROWING:**

**Sweet Cherries  
Grain Corn  
Apples (ALL)  
Squash  
Lima Beans (Unspecified)  
Pumpkins  
Safflower  
Chicken Eggs (Unspecified)  
English Walnuts**





# Trading Partners

In 2018, San Joaquin County traded with **99** different countries. San Joaquin County's crops have traveled more than 10,000 miles away. The top five commodities traded in 2018 were: Rice (Milled), Walnuts, Almonds, Rice (Bran), and Onions. Of these top five commodities, we exported 67,243 tons of Rice (Milled), 48,944 tons of Walnuts, 36,255 tons of Almonds, 27,147 tons of Rice (Bran), and 8,202 tons of Onions.

<b>Total Certificates</b>	<b>10,478</b>	Australia	141	Kuwait	36	Iceland	20
Korea, Republic of	1,777	United Kingdom	134	Philippines	36	Bahrain	20
Japan	1,386	Netherlands	120	Algeria	34	Bangladesh	20
Canada	938	Thailand	109	New Zealand	33	Nicaragua	19
Turkey	846	Israel	104	Norway	33	Argentina	16
Taiwan	752	Pakistan	80	Egypt	33	Portugal	15
China	650	Brazil	68	Colombia	31	Lithuania	14
United Arab Emirates	622	Morocco	64	Malaysia	31	Honduras	14
Italy	588	Saudi Arabia	62	Afghanistan	30	Belgium	14
India	477	Indonesia	61	Singapore	28	Switzerland	14
Mexico	412	Kazakhstan	52	Jordan	26	Guatemala	12
Hong Kong	411	Lebanon	52	Dominican Republic	26	El Salvador	12
Vietnam	338	Panama	50	Latvia	24	South Africa	11
Spain	334	Chile	48	France	24	Poland	10
Germany	222	Greece	45	Iraq	21	Costa Rica	10



# Careers in Agriculture

There are many other careers in agriculture rather than farming. Agriculture is the science of crop and livestock production. Careers in agriculture spread across many fields of study such as animal science, horticulture, natural resources, rangeland management, and many more.

**Agronomist:** Scientists that create solutions to increase soil productivity, a crop's seed quality, and a crop's nutritional value.

**Agricultural Economist:** Examine trends and patterns involving the economic value of agricultural labor, commodities, and internal and external affairs.

**Agricultural Lawyer:** Specialize in agricultural disputes pertaining to water, environmental issues, agricultural labor, theft of livestock, and pesticide application.

**Biologist:** Conduct research, collect samples, and measure findings about organisms. They oversee the behaviors, habits, and environment of an organism.

**Pest Control Advisor:** Are licensed individuals who survey agricultural and horticultural crops for harmful pests and make recommendations on how to treat, control, or prevent their findings.

**Artificial Insemination Technician:** Collect, transport, store, prepare, and administer semen for breeding purposes.

**Agricultural Commissioner:** Enforce food and agriculture codes for the public's health, safety, and welfare.

**Livestock Nutritionist:** Specialize in dietary needs of livestock in order for them to perform at optimal levels.

**Irrigation Technician:** Manage irrigation tactics and equipment such as sprinklers, waterlines, pumps, and valves.



**Farmer:** The farmer is an agriculturist who raises crops, livestock, and other commodities for consumption. With new technology, farmers are able to use more efficient techniques to increase output of commodities to match our growing population. The modern day farmer may choose to obtain a college degree in animal science, horticulture, natural resources, crop science, or biology in order to keep up with the technological advancements of the agricultural industry. Even with new advancements, farmers have many outside factors they are unable to control such as weather, trade, regulations, etc. The farmer is the most important role in agriculture because they are in charge of feeding the world while facing these extenuating circumstances.

**Where would you be without the farmer?**



# Old to New Technology



Photo provided by Lodi Winegrape Commission



Advances in agriculture have allowed growers to farm more efficiently, cost effectively, and productively. Drones have the capability of taking aerial images that bi-wing planes once did. As farmers still use tractors, they have advanced tremendously allowing for the use of many implements and versatility in the field. Optical sorting has eliminated the need for hand sorting of commodities with the use of cameras and lasers. These are some examples of how STEM has helped to make advances in agriculture.

# Direct Marketing

A Certified Farmers' Market is a venue that provides growers an opportunity to sell fresh produce to the public that they have cultivated themselves. The Commissioner's Office inspects certified producers growing grounds to ensure that they are only selling products they grew. In 2018 San Joaquin County registered **75** certified producers and the county hosts **6** certified farmers' markets.

## Tracy

### *San Joaquin Farmers Market*

8 a.m. to 1 p.m.  
April 7 to November  
Saturdays

## Manteca

### *Manteca Certified Farmers Market*

4:30 p.m. to 8 p.m.  
June 5 to July 31  
Tuesdays

## Ripon

### *Ripon Cetified Farmers Market*

4 p.m. to 8 p.m.  
Year Round  
hursdays

## Lodi

### *Downtown Lodi Market*

5 p.m to 8:30 p.m.  
May 17 to August 30  
Thursdays

## Stockton

### *Weberstown Mall Market*

8 a.m. to 1 p.m.  
April to November  
Sundays & Thursdays

## Escalon

### *Small Town Roots*

9 a.m. to 12 p.m.  
August to October  
Saturday



Direct marketing allows for consumers to interact with the individual who grew their food. Shopping at your farmers' market allows for you to purchase locally grown produce.



# Organic Production

What is Organic? According to the United States Department of Agriculture (USDA), “Certified organic foods are grown and processed according to federal guidelines addressing, among many factors, soil quality, animal raising practices, pest and weed control, and use of additives. Produce can be called organic if it’s certified to have grown on soil that had no prohibited substances applied for three years prior to harvest. Prohibited substances include most synthetic fertilizers and pesticides.”

What role do Agricultural Commissioners’ play in this process? The Agricultural Commissioners’ offices across the state conduct organic enforcement and registration activities overseen by the California State Organic Program. San Joaquin County had **32** registered organic producers, **21** organic handlers, and **5** organic processors in 2018. There were **1,316** certified organic acres growing with a gross value of **\$9,855,800**

Commodity	Year	Harvested Acreage	Total Value
Fruit (Excluding Citrus)	2018	847	\$3,244,000
	2017	974	\$4,418,000
Citrus	2018	68	\$51,800
	2017	5	\$46,100
Nuts	2018	342	\$3,617,000
	2017	369	\$3,861,000
Vegetables	2018	59	\$635,000
	2017	168	\$999,000
Livestock & Poultry Products*	2018	-	\$2,178,000
	2017	-	\$10,487,000
Other	2018	0.7	\$130,000
	2017	0.7	\$450,000
Total	2018	1,316	\$9,855,800
	2017	1,520	\$20,261,000

\*Excludes Organic Eggs

When choosing organic products, look for the United States Department of Agriculture (USDA) stamp, which certifies the commodity as organic.



# Pest Exclusion

The mission of Pest Exclusion is to prevent exotic pests from entering or spreading within San Joaquin County. The Agricultural Biologists in our county oversee the enforcement of quarantines by inspecting shipments from all over the world. These inspections are conducted at various parcel facilities, nurseries, and any other shipment locations in the county.

Shipments	
Type	Number Inspected
Parcel	9,029
Nursery Blue Tags	1,754
Truck	825
Air Freight	79
Sea Freight	12
Seed Shipments	87
Gypsy Moth	7

Finds		
Intercepted Pests	Number of Finds	Pest Rating
Scale Insects	1	Q
Aphids	2	Q
Whiteflies	1	Q
Mealybugs	2	Q
Ants	1	Q
Caterpillars	1	Q
Snails	3	A
Scale Insects	2	A
Ants	2	A
Whitefly	1	A
Bagworm	1	A
Thrips	1	A

## Integrated Pest Management

Integrated Pest Management (IPM) is an environmentally friendly approach to managing pests. IPM strategically implements a combination of methods to solve pest problems. Ideally, prevention is the first step to Integrated Pest Management; however, when thresholds are surpassed there are numerous methods one can implement.

One method involves using natural enemies to combat pests. In San Joaquin County, the Russian Knapweed (*Rhaponticum repens*) has become an invasive nuisance with its ability to spread 25 feet into the soil. In an effort to minimize the spreading, California Department of Food and Agriculture with the San Joaquin County Agricultural Commissioner's Office released Russian Knapweed Gall Wasps (*Aulacidea acroptilonica*), a biological control method, in order to slow the weed from further spreading. The parasitic Gall Wasp is 2mm long and only targets the Russian Knapweed. By laying its eggs within the weed's tissues, galls form, and prevent the weed from spreading seeds.

Growers within the county have also made efforts to implement IPM biological control methods. You may have heard about ladybug releases throughout the county. Growers within the county release varieties of lady beetles in efforts to subdue mealybug populations within agricultural and environmental plants. Drone technology has enabled growers to place the natural enemies more swiftly and precisely throughout their crops.





# Pest Detection

Pest detection is an additional line of defense to protect agriculture and prevent environmentally invasive pests from establishing within the county. Early detection and localized eradication is key to stopping infestations. In 2018, San Joaquin County Pest Surveyors placed and monitored traps for the following pests:



**General  
Fruit Fly**

## **General Fruit Fly**

*Trapping Season:*

Apr. - Oct.

*Host:* Fruit Trees

*Traps Deployed:* 411



**Melon  
Fruit Fly**

## **Melon Fruit Fly**

*Trapping Season:*

Jun. - Sept.

*Host:* Vegetable Garden

*Traps Deployed:* 341



**Oriental  
Fruit Fly**

## **Oriental Fruit Fly**

*Trapping Season:*

Apr. - Oct.

*Host:* Fruit Trees

*Traps Deployed:* 615



**Mediterranean  
Fruit Fly**

## **Mediterranean Fruit Fly**

*Trapping Season:*

Apr. - Oct.

*Host:* Fruit Trees

*Traps Deployed:* 615



**Gypsy Moth**

## **Gypsy Moth**

*Trapping Season:*

Jun. - Sept.

*Host:* Shade Trees

*Traps Deployed:* 250

## **Asian Citrus Psyllid**

*Trapping Season:*

Year Round

*Host:* Citrus

*Traps Deployed:* 2,184



**Asian Citrus  
Psyllid**

## **G.W.S.S.**

*Trapping Season:*

(Nursery/Retail)

Feb. - Oct./Apr. - Oct

*Host:* Ornamental

*Traps Deployed:* 2,267



**Glassy Winged  
Sharpshooter**

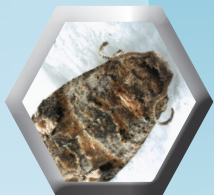
## **European Grapevine Moth**

*Trapping Season:*

Apr. - Oct.

*Host:* Fruit Trees

*Traps Deployed:* 4,487



**European  
Grapevine Moth**

## **Light Brown Apple Moth**

*Trapping Season:*

Apr. - Oct.

*Host:* Fruit Trees

*Traps Deployed:* 625



**Light Brown  
Apple Moth**

## **Japanese Beetle**

*Trapping Season:*

Jun. - Sept.

*Host:* Turf/Landscape

*Traps Deployed:* 217



**Japanese  
Beetle**

# Weights & Measures

**Serving San Joaquin County for over 100 years**

The Weights and Measures is mandated by state law to protect the economic interest of all buyers and sellers of every transaction involving the exchange of goods, property and services. Our mission is to promote the equity, protect the consumers and businesses alike, and enforce when necessary laws and regulations to safeguard the economic health of every citizen and competing business in the county.



## 2018 HIGHLIGHTS

This year the department put into service a new piece of equipment, a railroad test cart used to test the 6 commercial railroad scales here in the county. These scales weigh railcars that transport liquid and dry products throughout the state and across the nation.

Below are few statistics of the different types and number of inspections that the San Joaquin County Weights and Measures officials performed in 2018 along with the percentage of compliance found during the preliminary inspection.

Device Type	2018 Inspections	Compliance Percentage
Counter Scales	436	98.4
Computing Scales	1,646	98.7
Vehicle Scales	321	93.8
Retail Motor Fuel Dispensers	6,849	94.4
Retail Water Meters	140	91.7
Taximeters	18	93.8
Railroad Scales	20	85.7



# San Joaquin County General Information

## Vision Statement

By embracing the core values of honesty, integrity, trust, customer service, and continuous improvement, we will serve the citizens, industry, natural resources and the agricultural community of San Joaquin County.

## Our Mission

Our mission is to promote and protect the health, safety, and welfare of the citizens of San Joaquin County and our agricultural community.

**County Seat:** Stockton

**Incorporated Cities:** Escalon • Lathrop • Lodi • Manteca • Ripon • Stockton • Tracy

**Unincorporated Cities:** Acampo • Clements • Collierville • Farmington • French Camp • Linden • Lockeford • Morada • Mountain House • Thornton • Victor • Waterloo • Woodbridge

**San Joaquin County Population:** 745,424 (2017 Census)

**Lowest Elevation in County:**

In the Delta Area, 12 Feet below Sea Level.

**Highest Elevation in County:**

In the Southwest Hills, 3,065 Feet above Sea Level

The San Joaquin County Agricultural Commissioner's Office worked

**IN PARTNERSHIP WITH:**



Almond Alliance of California • American Ag Credit • California Cherry Board • California Walnut Board • Lodi Winegrape Commission • Lodi District Grape Growers Association • San Joaquin County Cooperative Extension • San Joaquin Delta College Students • San Joaquin Farm Bureau to complete the 2018 Crop Report. Without their support and contributions the publication of this report would not be possible.

